

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Liu et al.

Examiner: Unassigned

Serial No.: Unassigned

Group Art Unit: Unassigned

Filed: Herewith

Docket: 10164-1 (125-497)

For: CATALYTIC PRODUCTION OF
LIGHT OLEFINS FROM NAPHTHA
FEED

Dated: July 6, 1999

1c511 U.S. PRO
09/351147



Assistant Commissioner for Patents
Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

Sir:

In fulfillment of the requirements of candor and good faith set forth in 37 C.F.R. § 1.56, Applicants submit herewith the following Information Disclosure Statement in accordance with the provisions of 37 C.F.R. §§ 1.97 and 1.98.

U.S. PATENT DOCUMENTS

<u>PATENTEE</u>	<u>PATENT NO.</u>	<u>ISSUE DATE</u>
Kaeding et al.	3,911,041	October 7, 1975
Plank et al.	3,939,058	February 17, 1976
Butter et al.	3,972,832	August 3, 1976
Plank et al.	4,141,859	February 27, 1979
O'Rear et al.	4,171,257	October 16, 1979
O'Rear et al.	4,251,348	February 17, 1981
O'Rear et al.	4,282,085	August 4, 1981
Mayer et al.	4,347,121	August 31, 1982
O'Rear et al.	4,390,413	June 28, 1983
Young	4,423,266	December 27, 1983

PATENTEE**PATENT NO.****ISSUE DATE**

Olbrich et al.	4,436,614	March 13, 1984
Olbrich et al.	4,502,945	March 5, 1985
Bowes	4,582,815	April 15, 1986
Chu	4,590,321	May 20, 1986
Nemet-Mavrodin	4,918,256	April 17, 1990
Li et al.	4,980,053	December 25, 1990
Del Rossi et al.	5,019,664	May 28, 1991
Leyshon et al.	5,026,936	June 25, 1991
Absil et al.	5,053,374	October 1, 1991
Gaffney et al.	5,171,921	December 15, 1992
Marler	5,182,242	January 26, 1993
Dessau et al.	5,292,976	March 8, 1994
Absil et al.	5,348,643	September 20, 1994
Zhicheng et al.	5,380,690	January 10, 1995
Adewuyi et al.	5,389,232	February 14, 1995
Absil et al.	5,456,821	October 10, 1995
Tsang et al.	5,472,594	December 5, 1995
Hsing et al.	5,637,207	June 10, 1997
Zaiting et al.	5,670,037	September 23, 1997

FOREIGN PATENT DOCUMENTS**Patent Office****Document No.****Publication Date**

EPO	EP 0 347 003 B1	12/20/89
EPO	EP 0 372 632 B1	06/13/90
EPO	EP 0 385 538 B1	09/05/90
EPO	EP 0 490 435 B1	06/17/92
PCT	WO 98/03612	01/29/98

NON-PATENT PUBLICATIONS

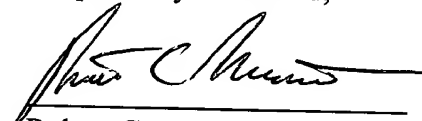
1. "The Paragon Process: A New Hydrocracking Concept", D. J. O'Rear, Ind. Eng. Chem. Res. 26:2337-2344 (1987).
2. "Cracking of FC and Coker Naphthas by ZSM-5 Catalyst and Equilibrium FC Catalyst", Hsing et al., Symposium on Hydrogen Transfer in Hydrocarbon Processing, Div. Of Petroleum Chemistry Inc., 208th Meeting, Am. Chem. Soc. Washington, D.C., p. 388-392 (1994).
3. "Deep Catalytic Cracking Plant Produces Propylene in Thailand", Oil & Gas Journal, p. 49-53 (1998).
4. "Deep Catalytic Cracking, Maximize Olefin Production", Chapin et al, NPRA Annual Meeting, AM-94-43, p.1-14 (1994).
5. "DCC Flexibility for Isoolefins Production", Li et al., Symposium on Advances in Fluid Catalytic Cracking, Division of Petroleum Chemistry, Inc. 206th National Meeting, Am. Chem Soc. Chicago, p. 581-583 (1993).
6. "DCC - A New Propylene Production Process from Vacuum Gas Oil", Zaiting et al., National Petroleum Refiners Association", AM-90-40, p. 1-14 (1990)
7. "Commercial Trial of DCC (Deep Catalytic Cracking) Process for Gaseous Olefins Production", Xieqing et al., Research Institute of Petroleum Processing, SINOPEC (undated)
8. "Deep Catalytic Cracking for Light Olefins", Chapin et al., Presented at Fifth World Congress of Chemical Engineering, San Deigo (1996).

Copies of the documents set forth above have been enclosed herewith for the convenience of the Examiner. A separate listing of these publications has been provided on Form PTO-1449, also enclosed herewith.

In view of the present submission, it is believed that the present application is in all respects complete, and in condition for examination and favorable consideration.

If the Examiner has any questions or comments relating to the present application, he or she is respectfully invited to contact Applicants' attorney at the telephone number provided below.

Respectfully submitted,



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